

Mass spectrometric analysis of accumulated TDP-43 in amyotrophic lateral sclerosis brains

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Keywords

TDP-43, inclusion body, phosphorylation, fragmentation, frontotemporal lobar degeneration with ubiquitin-positive inclusions, amyotrophic lateral sclerosis, proteomics, mass spectrometry.

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Figure legends

Supplemental Figure S1

Identification of cleavage site peptides by LC-MS/MS analysis. Product ion spectrum of a mass signal of tryptic or chymotryptic peptides detected in gel bands from case 1 (A-E) and from case 2 (G-L), showing the b/a and y ion series. These peptides were listed in Table 1 and 2. Cleavage sites were indicated by arrows in Figure 3.

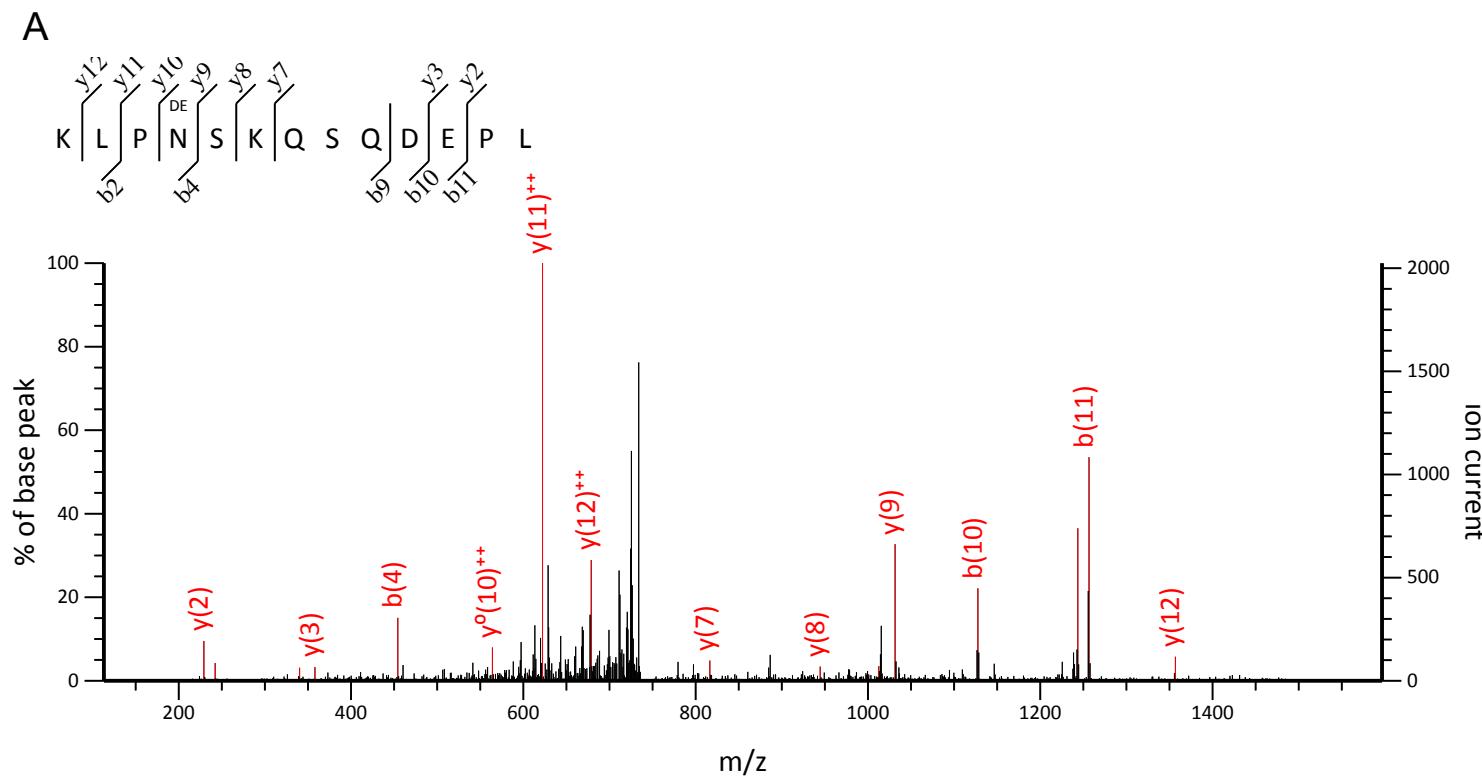


Figure S1

B

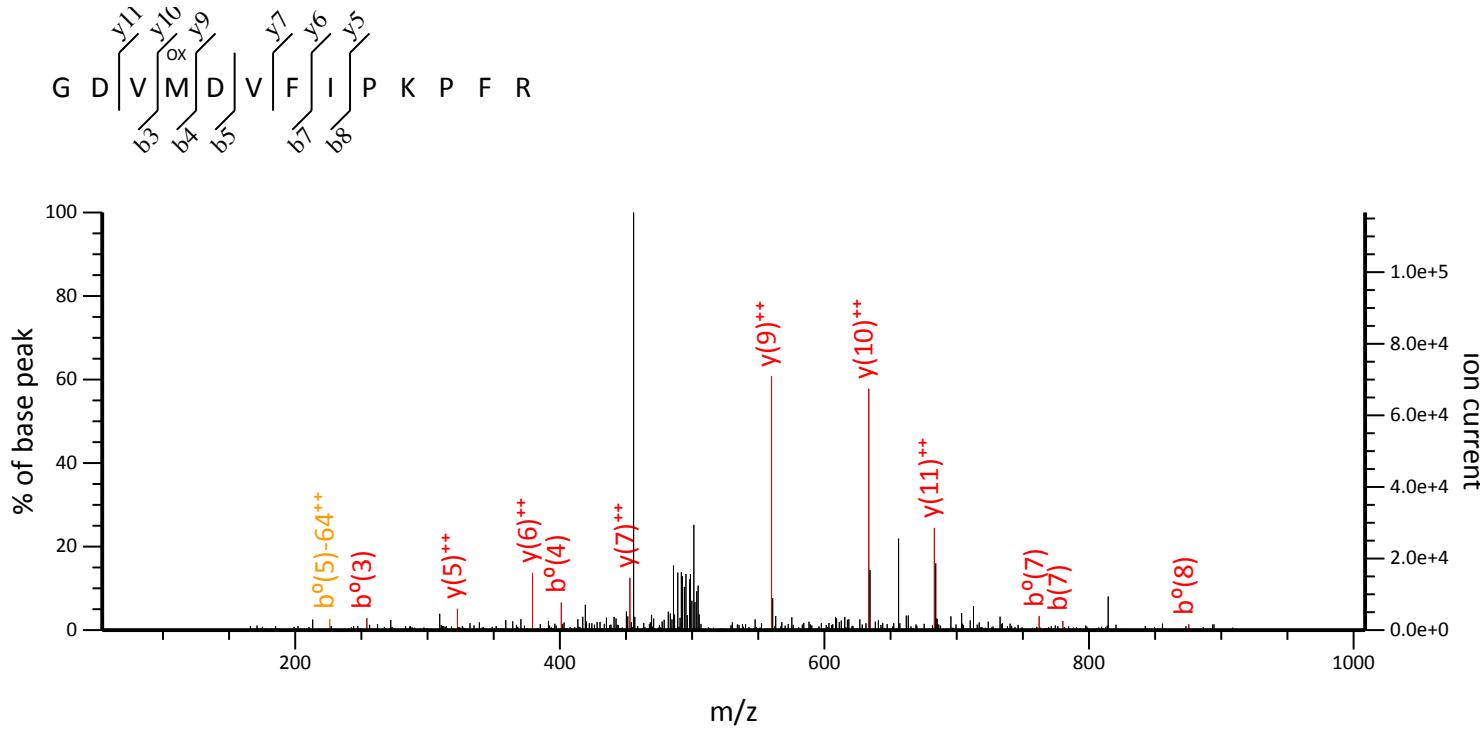


Figure S1

C

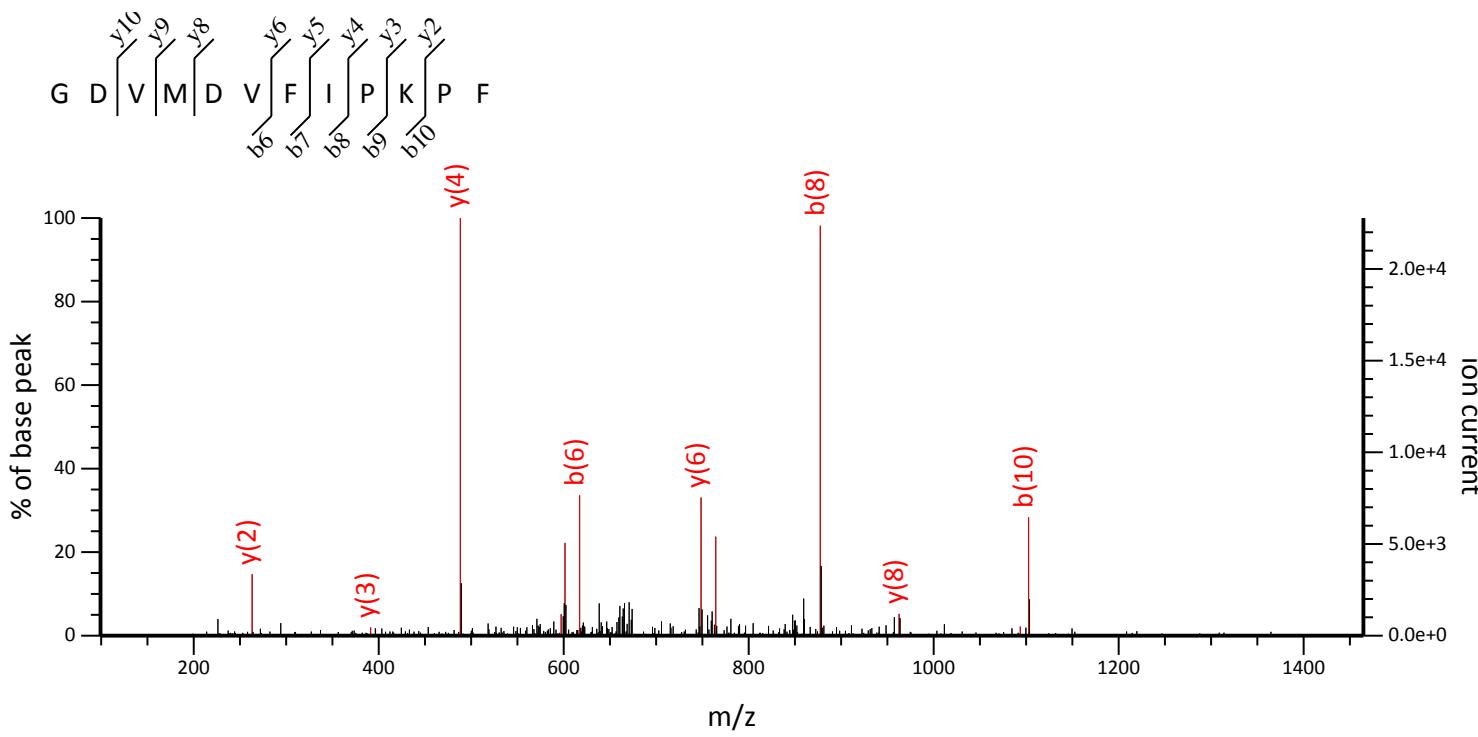


Figure S1

D

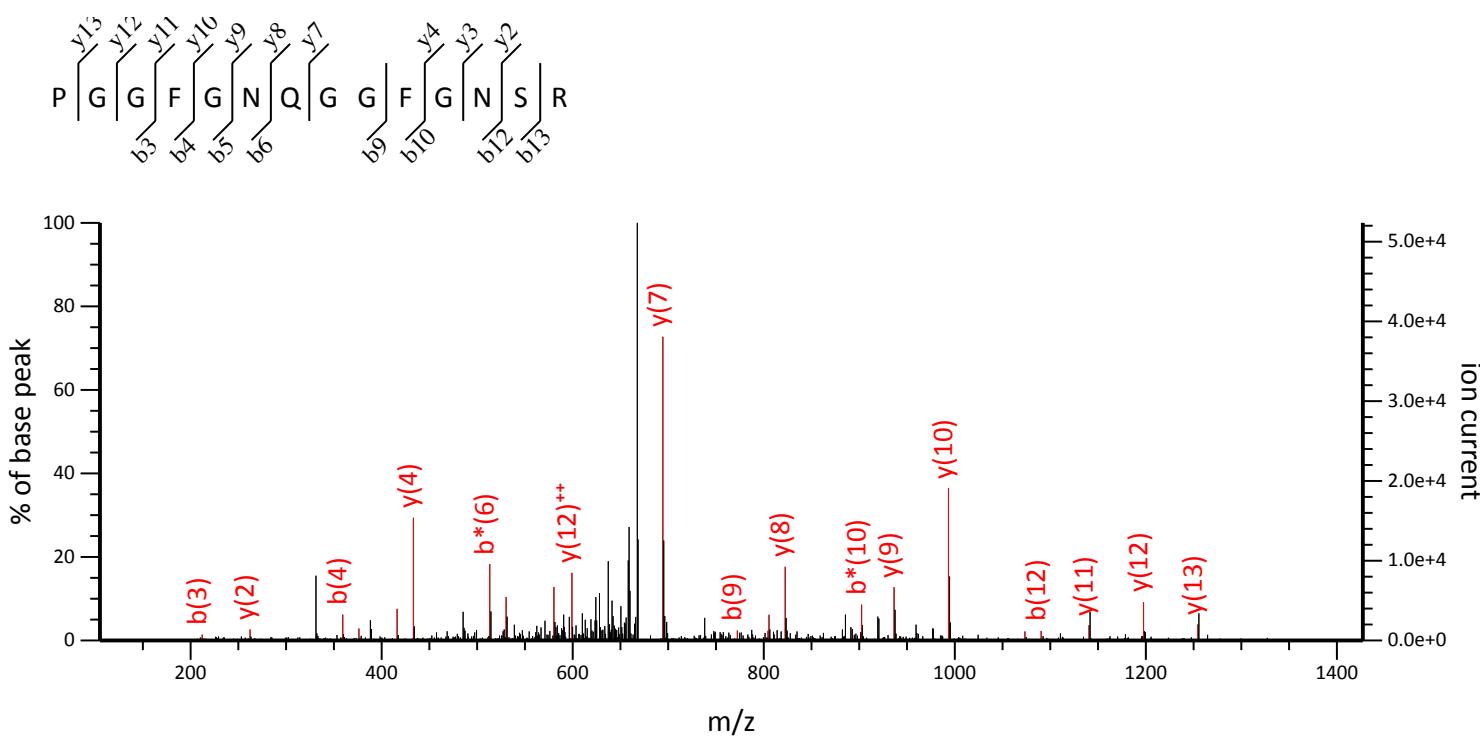


Figure S1

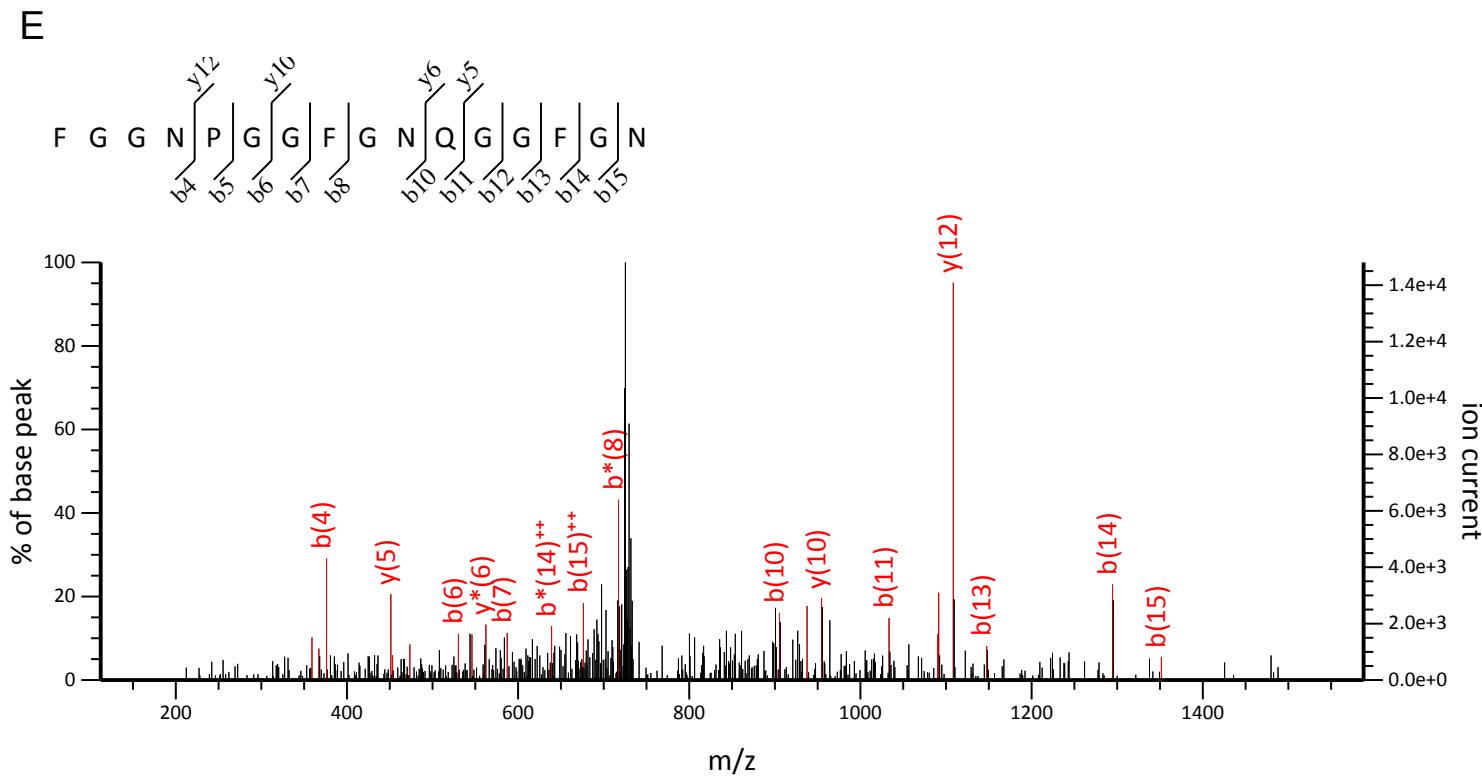


Figure S1

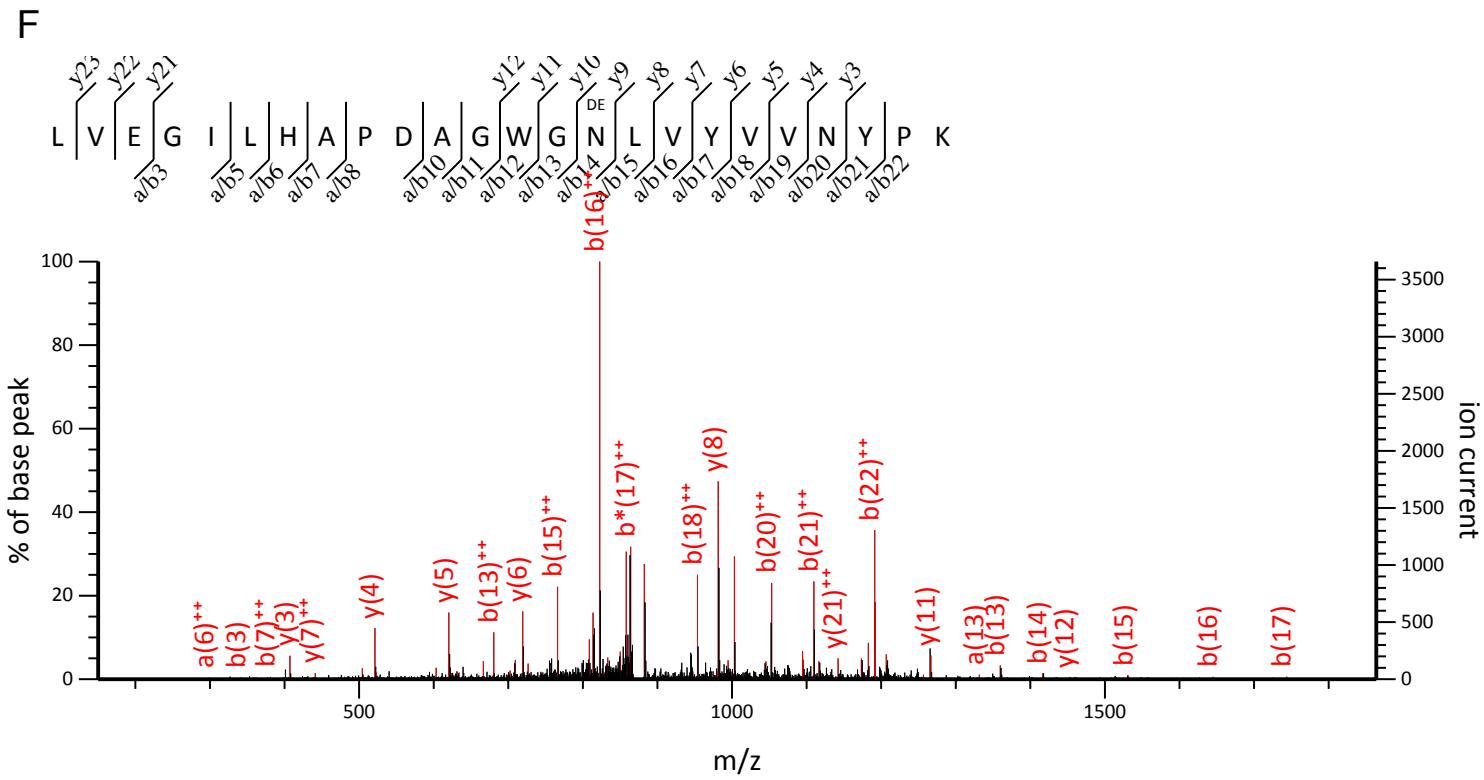


Figure S1

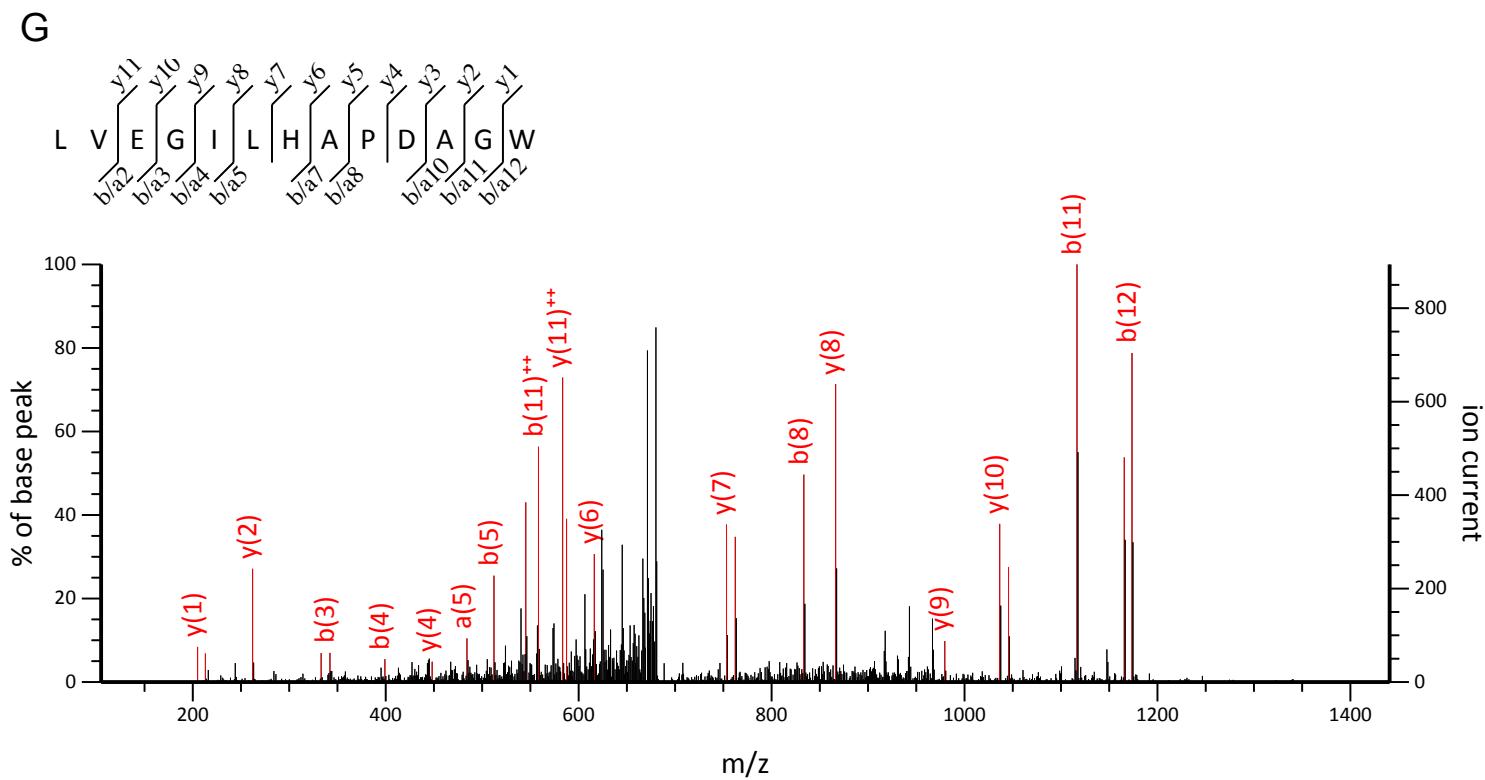


Figure S1

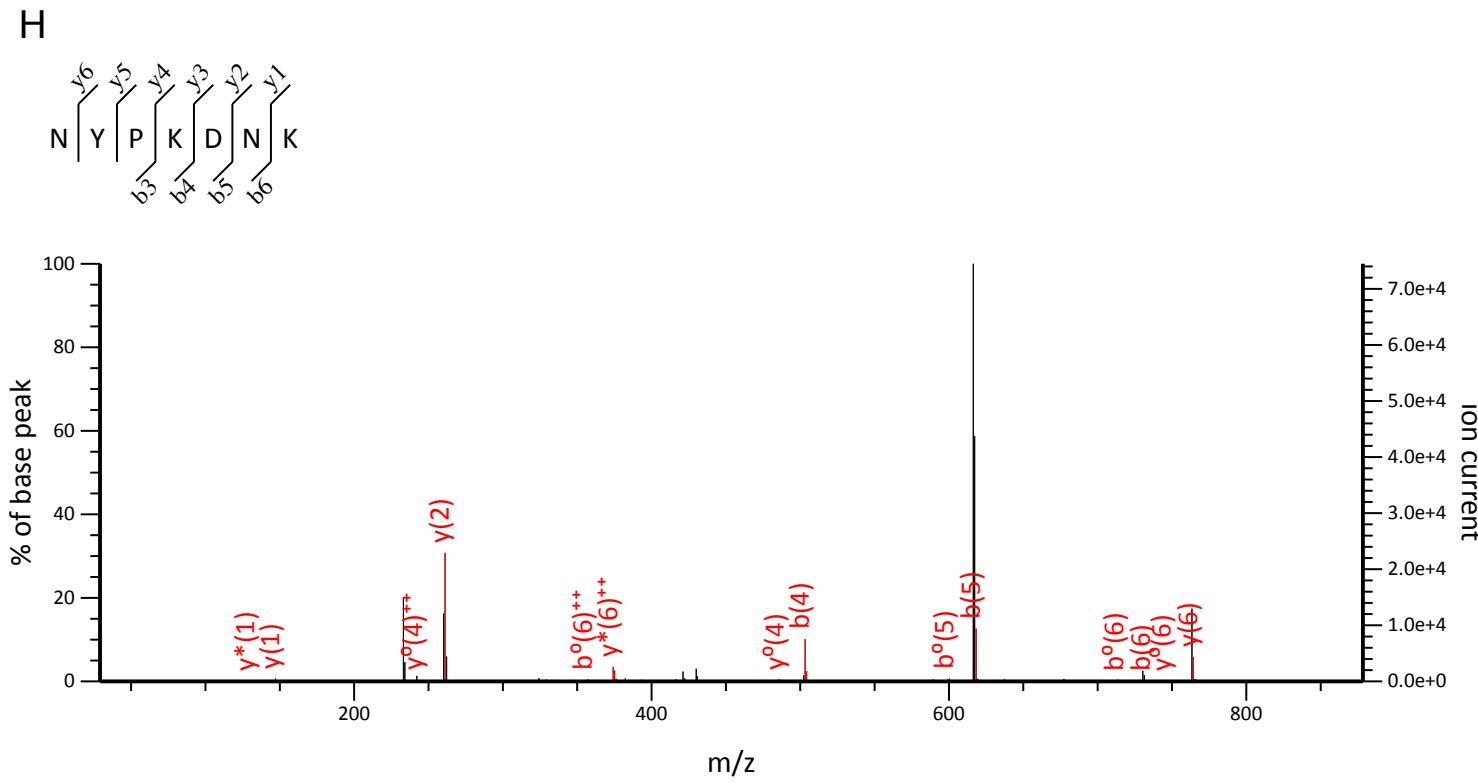


Figure S1

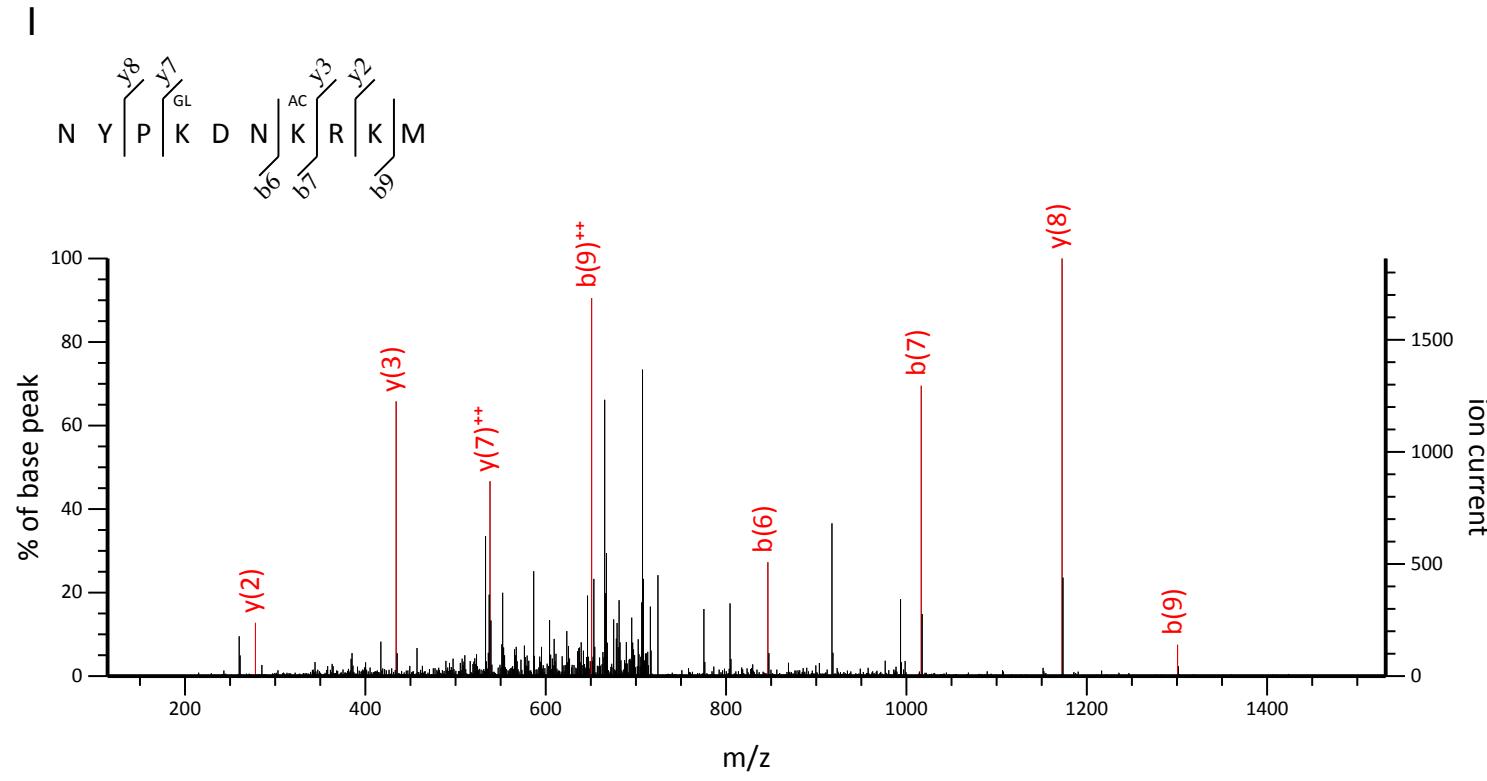


Figure S1

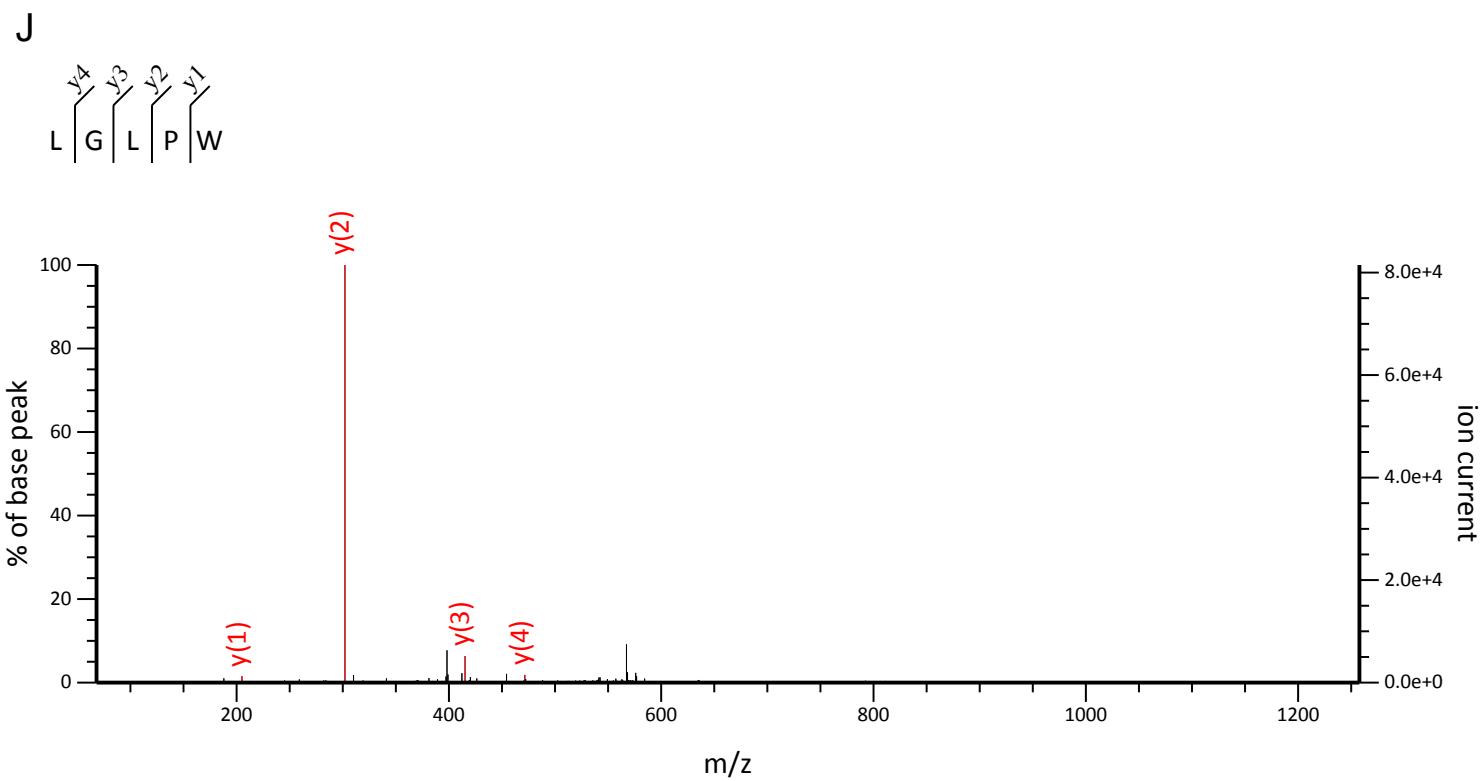


Figure S1

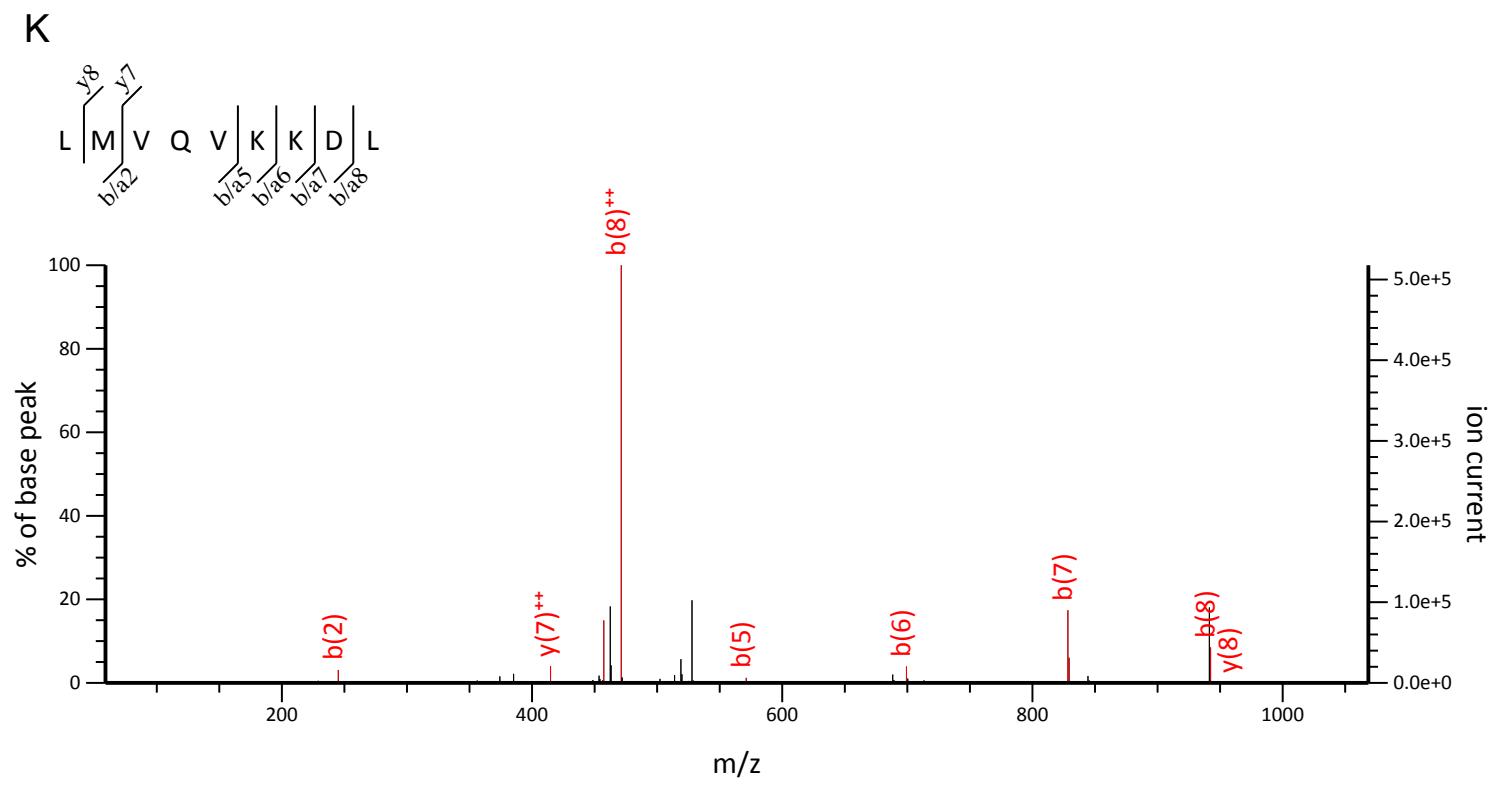


Figure S1

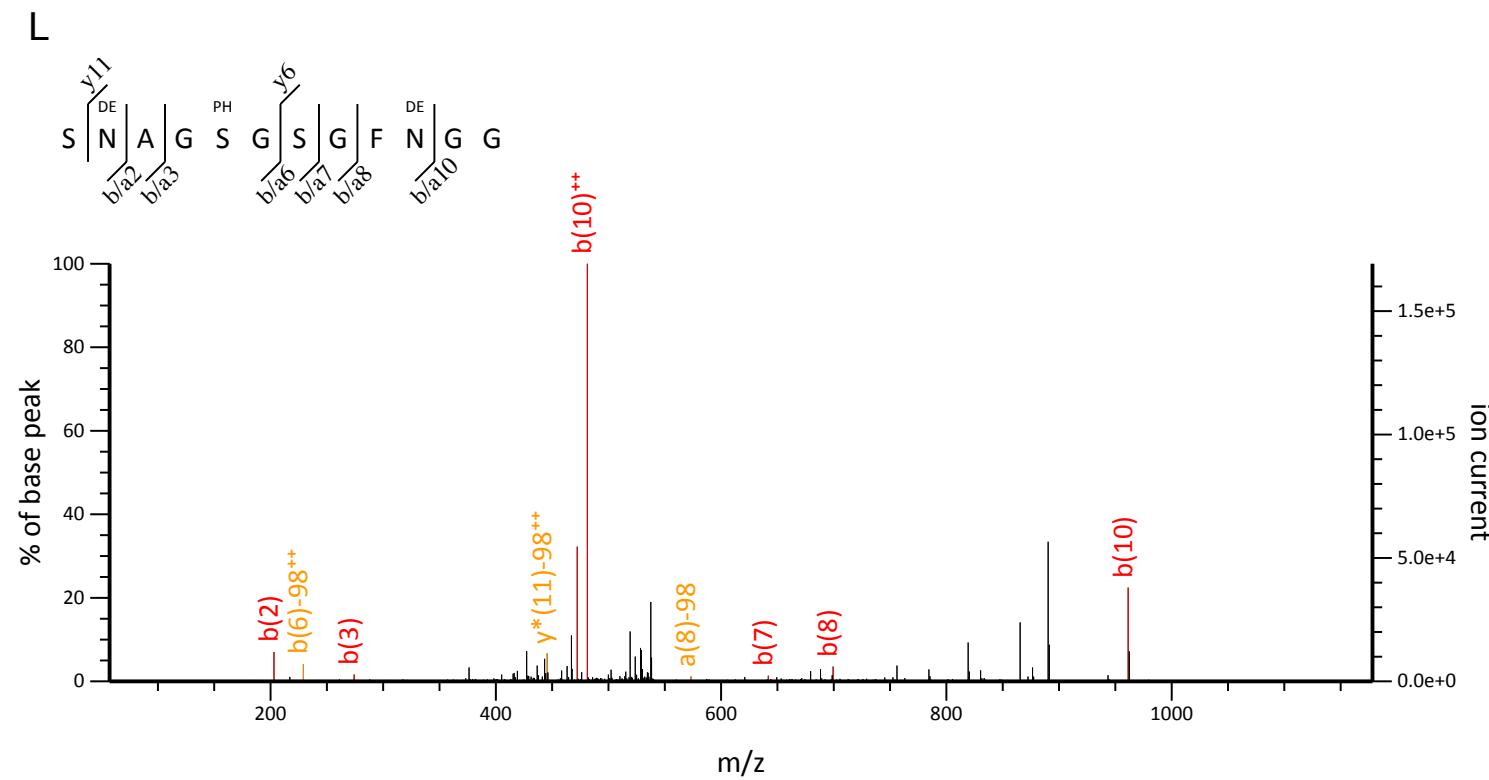


Figure S1

Uncategorized Sample	BioSample 1	(F001793)	Neurofilament heavy polypeptide OS=Homo sapiens GN=NEFH PE=1 SV=4	NFH_HUMAN	SwissProt_2014_08.fasta	112,480.10	100.00%	3	3	5	0.03%	4.09%
Uncategorized Sample	BioSample 1	(F001793)	Ubiquitin–60S ribosomal protein L40 OS=Homo sapiens GN=UBA52 PE=1 SV=2	RL40_HUMAN,RS27A_HUMAN, U	SwissProt_2014_08.fasta	14,728.90	100.00%	2	2	22	0.14%	22.70%
Uncategorized Sample	BioSample 1	(F001793)	Neural cell adhesion molecule 1 OS=Homo sapiens GN=NCAM1 PE=1 SV=3	NCAM1_HUMAN	SwissProt_2014_08.fasta	94,574.30	100.00%	5	5	5	0.03%	9.67%
Uncategorized Sample	BioSample 1	(F001793)	IQ motif and SEC7 domain-containing protein 2 OS=Homo sapiens GN=IQSEC2 PE=1 SV=1	IQEC2_HUMAN	SwissProt_2014_08.fasta	161,738.20	100.00%	5	5	6	0.04%	4.80%
Uncategorized Sample	BioSample 1	(F001793)	Microtubule-associated protein 1B OS=Homo sapiens GN=MAP1B PE=1 SV=2	MAP1B_HUMAN	SwissProt_2014_08.fasta	270,634.40	100.00%	2	2	2	0.01%	1.18%
Uncategorized Sample	BioSample 1	(F001793)	Contactin-1 OS=Homo sapiens GN=CNTN1 PE=1 SV=1	CNTN1_HUMAN	SwissProt_2014_08.fasta	113,322.80	100.00%	3	3	3	0.02%	3.24%
Uncategorized Sample	BioSample 1	(F001793)	Plectin OS=Homo sapiens GN=PLEC PE=1 SV=3	PLEC_HUMAN	SwissProt_2014_08.fasta	531,783.90	100.00%	11	11	12	0.08%	2.88%
Uncategorized Sample	BioSample 1	(F001793)	Sodium/potassium-transporting ATPase subunit alpha-1 OS=Homo sapiens GN=ATP1A1 PE=1 SV=1	AT1A1_HUMAN	SwissProt_2014_08.fasta	112,899.50	100.00%	5	5	5	0.03%	6.35%
Uncategorized Sample	BioSample 1	(F001793)	Complement C4-A OS=Homo sapiens GN=C4A PE=1 SV=2	C04A_HUMAN	SwissProt_2014_08.fasta	192,786.80	100.00%	5	5	7	0.05%	4.99%
Uncategorized Sample	BioSample 1	(F001793)	SH3 and multiple ankyrin repeat domains protein 3 OS=Homo sapiens GN=SHANK3 PE=1 SV=3	SHAN3_HUMAN	SwissProt_2014_08.fasta	184,671.50	99.80%	2	2	2	0.01%	2.08%
Uncategorized Sample	BioSample 1	(F001793)	Spectrin beta chain, non-erythrocytic 1 OS=Homo sapiens GN=SPTBN1 PE=1 SV=2	SPTB2_HUMAN	SwissProt_2014_08.fasta	274,613.40	100.00%	16	16	16	0.10%	8.88%
Uncategorized Sample	BioSample 1	(F001793)	Collagen alpha-3(VI) chain OS=Homo sapiens GN=COL6A3 PE=1 SV=5	CO6A3_HUMAN	SwissProt_2014_08.fasta	343,667.40	100.00%	3	3	3	0.02%	1.29%
Uncategorized Sample	BioSample 1	(F001793)	Collagen alpha-(VI) chain OS=Homo sapiens GN=COL6A1 PE=1 SV=3	CO6A1_HUMAN	SwissProt_2014_08.fasta	108,531.00	100.00%	3	3	3	0.02%	3.60%
Uncategorized Sample	BioSample 1	(F001793)	Neurofilament medium polypeptide OS=Homo sapiens GN=NEFM PE=1 SV=3	NFM_HUMAN	SwissProt_2014_08.fasta	102,471.30	100.00%	30	34	117	0.76%	40.50%
Uncategorized Sample	BioSample 1	(F001793)	Tenascin-R OS=Homo sapiens GN=TNR PE=1 SV=3	TENR_HUMAN	SwissProt_2014_08.fasta	149,560.40	100.00%	2	2	3	0.02%	2.36%
Uncategorized Sample	BioSample 1	(F001793)	Ferritin light chain OS=Homo sapiens GN=FTL PE=1 SV=2	FRIL_HUMAN	SwissProt_2014_08.fasta	20,020.60	100.00%	6	9	41	0.27%	32.60%
Uncategorized Sample	BioSample 1	(F001793)	Ferritin heavy chain OS=Homo sapiens GN=FTH1 PE=1 SV=2	FRIH_HUMAN	SwissProt_2014_08.fasta	21,226.20	100.00%	12	14	97	0.63%	46.40%
Uncategorized Sample	BioSample 1	(F001793)	2,3'-cyclic-nucleotide 3'-phosphodiesterase OS=Homo sapiens GN=CNP PE=1 SV=2	CN37_HUMAN	SwissProt_2014_08.fasta	47,580.60	100.00%	4	4	4	0.03%	13.50%
Uncategorized Sample	BioSample 1	(F001793)	Microtubule-associated protein tau OS=Homo sapiens GN=MAPT PE=1 SV=5	TAU_HUMAN	SwissProt_2014_08.fasta	78,927.70	100.00%	3	3	4	0.03%	5.01%
Uncategorized Sample	BioSample 1	(F001793)	Collagen alpha-2(VI) chain OS=Homo sapiens GN=COL6A2 PE=1 SV=4	CO6A2_HUMAN	SwissProt_2014_08.fasta	108,580.80	100.00%	3	3	3	0.02%	3.34%
Uncategorized Sample	BioSample 1	(F001793)	Versican core protein OS=Homo sapiens GN=VCAN PE=1 SV=3	CSPG2_HUMAN	SwissProt_2014_08.fasta	372,812.60	100.00%	5	5	6	0.04%	2.18%
Uncategorized Sample	BioSample 1	(F001793)	Laminin subunit beta-2 OS=Homo sapiens GN=LAMB2 PE=1 SV=2	LAMB2_HUMAN	SwissProt_2014_08.fasta	195,975.90	100.00%	4	4	5	0.03%	2.61%
Uncategorized Sample	BioSample 1	(F001793)	Actin, cytoplasmic 1 OS=Homo sapiens GN=ACTB PE=1 SV=1	ACTB_HUMAN,ACTG_HUMAN	SwissProt_2014_08.fasta	41,737.80	100.00%	2	2	2	0.01%	7.47%
Uncategorized Sample	BioSample 1	(F001793)	Prolow-density lipoprotein receptor-related protein 1 OS=Homo sapiens GN=LRP1 PE=1 SV=2	LRP1_HUMAN	SwissProt_2014_08.fasta	504,551.80	100.00%	3	3	3	0.02%	0.84%
Uncategorized Sample	BioSample 1	(F001793)	Fibronectin OS=Homo sapiens GN=FN1 PE=1 SV=4	FINC_HUMAN	SwissProt_2014_08.fasta	262,616.90	100.00%	5	5	6	0.04%	3.10%
Uncategorized Sample	BioSample 1	(F001793)	Keratin, type II cytoskeletal 1 OS=Homo sapiens GN=KRT1 PE=1 SV=6	K2C1_HUMAN	SwissProt_2014_08.fasta	66,040.30	100.00%	3	3	4	0.03%	5.59%
Uncategorized Sample	BioSample 1	(F001793)	Neurofilament light polypeptide OS=Homo sapiens GN=NEFL PE=1 SV=3	NFL_HUMAN	SwissProt_2014_08.fasta	61,517.80	100.00%	2	2	2	0.01%	8.47%
Uncategorized Sample	BioSample 1	(F001793)	Calcium/calmodulin-dependent protein kinase type II subunit alpha OS=Homo sapiens GN=CAMK2A PE=1 SV=2	KCC2A_HUMAN	SwissProt_2014_08.fasta	54,088.70	100.00%	5	5	6	0.04%	13.40%